Amendments to the Claims:

This listing of claims will replace all prior listings of claims in the application.

Listing Of Claims:

Claim 1 **(currently amended):** A battery charger for charging a battery, comprising:

a controller ~~which detects~~ adapted to detect a charging voltage and a charging current of the battery and ~~controls~~ to control charging of the battery in accordance with a detection result;

a converter ~~which controls~~ adapted to control a voltage and a current of [[a]] an input DC power supplied to the battery; and

a switch ~~which sets~~ adapted to set a supply destination of the input DC power to one of said converter and said controller connected to an output of said converter in accordance with the voltage of the input DC power.

Claim 2 **(currently amended):** The charger according to claim 1, wherein when a DC power corresponding to the charging voltage of the battery is input, said switch [[sets]] is configured to set the supply destination of the input DC power to said controller, and when a DC power having a voltage higher than the charging voltage is input, said switch [[sets]] is configured to set the supply destination of the input DC power to said converter.

Claim 3 **(currently amended):** A battery charger for charging a battery, comprising:

a controller ~~which detects~~ adapted to detect a charging voltage and charging current of the battery and ~~controls~~ to control charging of the battery in accordance with a detection result;

a converter ~~which controls~~ adapted to control a voltage and current of a DC power supplied to the battery;

a first input connector ~~which supplies~~ adapted to supply the input DC power to said converter; and

a second input connector ~~which supplies~~ adapted to supply the input DC power to said controller connected to an output of said converter.

Claim 4 **(currently amended):** The charger according to claim 3, further comprising a detector ~~which detects~~ adapted to detect whether a plug is connected to said second input connector,

wherein said controller [[sets]] is adapted to set a quick charging start voltage of the battery in accordance with a detection result of said detector.

Claim 5 **(currently amended):** The charger according to claim 4, wherein when the plug is connected to said second input connector, said controller [[sets]] is configured to set a higher quick charging start voltage than in a case wherein no plug is connected to said second input connector.

Claim 6 **(currently amended):** A control method of a battery charger having a controller ~~which detects~~ adapted to detect a charging voltage and a charging current of the battery and ~~controls~~ to control charging of the battery in accordance with a detection result, and a converter ~~which controls~~ adapted to control a voltage and current of a DC power supplied to the battery, the method comprising the step of

setting a supply destination of the input DC power to one of the converter and the controller connected to an output of the converter in accordance with the voltage of the input DC power.

Claim 7 **(currently amended):** A control method of a battery charger having a converter ~~which controls~~ adapted to control a voltage and current of a DC power supplied to a battery through a switch, a first input connector which supplies the input DC power to the converter, a second input connector ~~which supplies~~ adapted to supply the input DC power to the switch, and a detector ~~which detects~~ adapted to detect whether a plug is connected to the second input connector, said method comprising steps of:

setting a quick charging start voltage of the battery in accordance with a detection result of the detector; and

detecting a charging voltage and a charging current of the battery and controlling the switch in accordance with a detection result to control charging of the battery.

Claim 8 **(currently amended):** A computer program product storing a computer readable medium comprising a computer program code, for a control method of a battery charger having a converter ~~which controls~~ adapted to control a voltage and current of a DC power supplied to a battery through a switch, a first input connector ~~which supplies~~ adapted to supply the input DC power to the converter, a second input connector ~~which supplies~~ adapted to supply the input DC power to the switch, and a detector ~~which detects~~ adapted to detect whether a plug is connected to the second input connector, said method comprising steps of:

setting a quick charging start voltage of the battery in accordance with a detection result of the detector; and

detecting a charging voltage and a charging current of the battery and controlling the switch in accordance with a detection result to control charging of the battery.

Claim 9 **(currently amended):** A battery charger for charging a battery, comprising:

a controller ~~which detects~~ adapted to detect a charging voltage and charging current of the battery and ~~controls~~ to control charging of the battery in accordance with a detection result;

a connector ~~which charges~~ adapted to charge the battery from a detachable plug and ~~receives~~ to receive supply of a DC power that operates said controller; and

a reset unit ~~which resets~~ adapted to reset an operation of said controller when a voltage supplied to said controller decreases,

wherein said controller ~~executes~~ is adapted to execute intermittent charging when the charging current is not more than a first threshold value I_{th1}.

Claim 10 **(currently amended):** The charger according to claim 9, wherein said controller ~~starts~~ is adapted to start quick charging when the charging voltage exceeds a predetermined value after a start of charging of the battery, ~~starts~~ to start timer-controlled supplemental charging when the charging current is not more than a second threshold value I_{th2}, ~~starts~~ to start the intermittent charging when the charging current is not more than a third threshold value I_{th3}, and [[ends]] to end charging under the timer control, and

wherein the threshold values of the current have a relationship given by $I_{th1}<I_{th3}<I_{th2}$.

Claim 11 **(currently amended):** A control method of a controller of a battery charger having a connector ~~which charges~~ adapted to charge a battery from a detachable plug and ~~receives~~ to receive supply of a DC power that operates the controller, and a reset unit ~~which~~

~~resets~~ adapted to reset an operation of the controller when a voltage supplied to the controller decreases, said method comprising steps of:

detecting a charging voltage and a charging current of the battery and controlling charging of the battery in accordance with a detection result; and

executing intermittent charging when the charging current is not more than a threshold value I_{th1}.

Claim 12 **(currently amended):** A computer program product storing a computer readable medium comprising a computer program code, for a control method of a controller of a battery charger having a connector ~~which charges~~ adapted to charge a battery from a detachable plug and ~~receives~~ to receive supply of a DC power that operates the controller, and a reset unit ~~which resets~~ adapted to reset an operation of the controller when a voltage supplied to the controller decreases, said method comprising steps of:

detecting a charging voltage and a charging current of the battery and controlling charging of the battery in accordance with a detection result; and

executing intermittent charging when the charging current is not more than a threshold value I_{th1}.

Claim 13 **(new):** A battery charger for charging a battery with an input DC power having a voltage and a current, comprising:

a converter adapted to control supply of the voltage and the current of the input DC power to the battery and having a first input connector adapted to electrically connect the input DC power to the converter, and a second input connector adapted to electrically connect the input DC power to an output of the converter;

a controller connected to the output of the converter and adapted to detect and to control charging of the battery in accordance with a voltage and a current of the battery;

a switch adapted to selectively route the input DC power in accordance with the voltage of the input DC power to one of the first input connector and the second input connector;

a detector adapted to detect whether a plug is connected to the second input connector; and

a reset unit adapted to reset an operation of the controller when a voltage supplied to the controller decreases,

wherein the controller is adapted to set a quick charging start voltage of the battery in accordance with a detection result of the detector, and wherein the controller executes intermittent charging when the charging current is not more than a first threshold value I_{th1}.